UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,237	12/21/2001	Eishi Mizobata	NECF 19.297	3184

26304 7590 02/12/2004

KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER	
AWAD, AMR A	

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,237	EISHI MIZOBOTA	
	Examiner	Art Unit	
	Amr Awad	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-129* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30 and 43-129* is/are rejected.

7)☒ Claim(s) *31-42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3-4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references cited in the information disclosure statements filed August 30, 2002; November 4, 2002 and March 13, 2003 have been considered by the Examiner; see attached PTO-1449.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 43-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite, "the scanning sustaining separation method" which lacks anteceded basis, which makes the claims indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-30, 43-48 and 121-129 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii et al. (US patent NO. 6,373,452; hereinafter referred to as Ishii).

As to independent claims 1, Ishii (figures 1-2) teaches An AC type plasma display panel (PDP) (10) and drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several x electrodes and every several Y electrodes are made to share a driver each (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii shows that the method comprising a step of writing to the pixels to form wall charges based on display data, the

same amount of wall charge being written to the X electrode and Y electrode in one pixel, and lighting and non-lighting of the pixels being controlled in accordance with the wall charge amount (col. 13, lines 6-16).

As to independent claim 2, Ishii (figures 1-2) teaches An AC type plasma display panel (PDP) (10) and drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several x electrodes and every several Y electrodes are made to share a driver each (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii shows that the method comprising a step of writing to the pixels to form wall charges based on display data, wall charges being written upon making the potentials of the X electrode and Y electrode in one pixel equal to each other, and lighting and non-lighting of the pixel being controlled in accordance with the wall charge amount (col. 13, lines 6-16).

As to independent claim 3, Ishii (figures 1-2) teaches An AC type plasma display panel (PDP) (10) and drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on

one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several x electrodes and every several Y electrodes are made to share a driver each (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii also teaches that the method comprising a step of writing to the pixels to form wall charges based on display data, the voltage of the wall charges formed on the X electrode and Y electrode in one pixel being at a level at which surface discharge does not occur between the X electrodes and Y electrodes even if the sustaining pulse voltage is added to said voltage (col. 13, lines 6-16).

As to independent claim 7, Ishii (figures 1-2) teaches An AC type plasma display panel (PDP) (10) and drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X

electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several x electrodes and every several Y electrodes are made to share a driver each (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii also teaches that the method comprising a step of writing to the pixels to form wall charges based on display data, the same amount of wall charge being written into the X electrode and Y electrode in one pixel, and lighting and non-lighting of the pixel being controlled in accordance with the wall charge amount (col. 13, lines 6-16).

As to independent claim 8, Ishii (figures 1-2) teaches an AC type plasma display panel (PDP) (10) drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, and all gaps between the X electrodes and Y electrodes are formed as discharge gaps, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and means for dividing surface discharge occurring between the X electrodes and Y electrodes are provided at the boundaries between the pixels and the adjacent pixels in the data electrode direction on the X electrodes and Y electrodes, and either every several X electrodes or Y electrodes are made to share a driver (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii also teaches that the method comprising a step of writing to the pixels to form wall charges based on display data, wall charges being

written upon making the potentials of the X electrodes and Y electrodes in one pixel equal to each other, and lighting and non-lighting of the pixel being controlled in accordance with the wall charge amount (col. 13, lines 6-16).

As to independent claim 9, Ishii (figures 1-2) teaches an AC type plasma display panel (PDP) (10) drive method, in which a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) are alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, a plurality of data electrodes (A1 to A6) are disposed on the other insulating substrate (16) so as to be orthogonal to the X electrodes and Y electrodes, and all gaps between the X electrodes and Y electrodes are formed as discharge gaps, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and means for dividing surface discharge occurring between the X electrodes and Y electrodes are provided at the boundaries between the pixels and the adjacent pixels in the data electrode direction on the X electrodes and Y electrodes, and either every several X electrodes or Y electrodes are made to share a driver (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61). Ishii also teaches that the method comprising a step of writing to the pixels to form wall charges based on display data, the voltage of the wall charges formed on the X electrode and Y electrode in one pixel being at a level at which surface discharge does not occur between the X electrode and Y electrode even if the voltage of the sustaining pulse is added to said voltage (col. 13, lines 6-16).

As to claims 4-6 and 10-12, Ishii teaches that the sustaining discharge for display is initially started by means of opposed discharge (abstract and figure 7).

As to claims 13-18, as can be seen in figure 7, Ishii shows that the opposed discharge is generated using the data electrodes as positive electrodes.

As to claims 19-24, as can be seen in figures 7-8, Ishii shows that, prior to writing, wall charges with polarities opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are adjusted when applying data pulses (col. 15, lines 29-38).

As to claims 25-30, as can be seen in figures 1-2 and 7-8, Ishii shows that the AC type PDP drive method according to claim 19, wherein the erasing and writing are caused between the X electrodes and Y electrodes (col. 15, lines 29-38).

As to claims 43-48, as can be seen in figures 7-8, Ishii shows that the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

As to independent claim 121, Ishii (figures 1-2) teaches an AC type plasma display panel (PDP) (10) comprising: a plurality of X electrodes (X1 to X5) and a plurality of Y electrodes (Y1 to Y4) being alternately disposed in parallel to each other on one of two insulating substrates (11 & 16) opposed to each other, at least either every several X electrodes or Y electrodes being made to share a driver; a plurality of data electrodes disposed in parallel to each other on the other insulating substrate so as to be orthogonal to the X electrodes and Y electrodes, all gaps between the X electrodes and Y electrodes being formed to be discharge gaps; pixels arranged in a

matrix form and formed at intersections between the discharge gaps and data electrodes (col. 9, line 57 through col. 10, line 30 and col. 10, lines 51-61); and cell partitions provided on the insulating substrate with the X electrodes and Y electrodes so as to be on the X electrodes and Y electrodes, for dividing surface discharge occurring between the X electrodes and Y electrodes, said cell partitions being provided at the boundaries between the electrodes and adjacent pixels in the data electrode direction on the X electrodes and Y electrodes (col. 10, lines 31-51).

As to claim 122, as can be seen in figures 1-2, Ishii shows that the cell partitions are disposed along the center lines of the respective X electrodes and Y electrodes.

As to claim 123, Ishii (figure 2) shows that the X electrodes and Y electrodes are formed of transparent electrodes formed on the insulating substrate, and metal electrodes whose widths are smaller than that of the transparent electrodes are provided on these transparent electrodes (col. 10, lines 12-44).

As to claims 124-129, figure 2 of Ishii clearly shows all the limitations of claims 124-129 (col. 10, lines 12-44).

Allowable Subject Matter

8. Claims 31-42 and 49-120 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to correct the rejection under 112-second paragraph of claims 43-48.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirakawa et al. (US patent NO. 6,097,358) teaches an AC plasma display with precise relationships in regards to order and value of the weighted luminance of sub-fields.

Naakamura et al. (US patent NO. 6,118,416) teaches a method for controlling alternating current plasma display panel with positive priming discharge pulse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

Amr Awad
2-7-2004
A.A.